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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,211	01/13/2005	Jan Watte	9303.39	2603
20792	7590	12/14/2005	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC			PEACE, RHONDA S	
PO BOX 37428			ART UNIT	PAPER NUMBER
RALEIGH, NC 27627			2874	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/521,211	Applicant(s) WATTE ET AL.	
	Examiner Rhonda S. Peace	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,9-12,20,27,29,31-36, and 38-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27,29,31-36 and 38-68 is/are allowed.
- 6) ☒ Claim(s) 1,4,9-11 and 20 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

In reference to the Office Action filed 8/16/2005, relevant art pertaining to a lifetime counter for a cleaving device has been found within the prior art. Therefore, the previous indication of allowable subject matter concerning this lifetime counter, now applicable to claim 1, has been withdrawn. Correspondingly, the new rejection of claims 1, 4, 9-11, and 20 has been made.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 4, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long et al (US 4621754) in further view of Tanaka et al (US 2003/0015076).

Regarding claims 1, 4, and 20, Long et al (US 4621754) discloses a hand held tool (column 7 lines 28-31) comprising the following:

- A fixing mechanism **20** to fix a ferrule **26** to an optical fiber by crimping, such that the fiber portion **90** extends through the ferrule (column 10 lines 47-50, column 12 lines 25-28 and 53-61, Figures 11A, 14A, and 14B).
- A cleaving mechanism **100**, which cleaves the fiber portion **90** when the fixing mechanism **20** has been fixed thereto, specifically cleaving only after the fixing of fixing mechanism **20**, has been completed (column 10 lines 47-50, column 11 lines 5-14 and 19-28 and 44-51, column 12 lines 11-17, Figure 11A).
- A rotating scoring blade **210**, arranged within cleaving mechanism **100**, to cleave the optical fiber as the blade is rotated, thereby allowing for a plurality of positions along the exterior of the blade to cleave the fiber (column 12 lines 11-12, column 13 lines 28-41, column 16 lines 6-9, Figures 11A and 11B).

However, Long et al does not disclose a lifetime indicator which counts the number of cleaves that have been made by the device after the set up procedure and/or the number of cleaves remaining for the device until a device re-set procedure is needed.

Tanaka et al discloses a method and apparatus for estimating a life-span of a cutter comprising indicator means which is possible of counting the number of times a blade is

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used within a cutting device (paragraph 0065). It would have been obvious to one of ordinary skill in the art to combine the teachings of Long et al and Tanaka et al, as this counter would allow the user to determine when the blade of the cutter needs to be changed, due to over-excessive wear, so as not to damage the device or item being cut if the blade were to break (paragraph 0065).

Claims 9, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Long et al (US 4621754) in further view of Tanaka et al (US 2003/0015076) and in further view of Blonder et al (EP 637763 A1).

Pertaining to claims 9, 10, and 11, Long et al and Tanaka et al discloses the device as described above, including the fixing mechanism **20** and cleaving mechanism **100** are arranged such that when the fiber is cleaved to produce an end face, it is done so at a preset position with relation to the ferrule **26**. This is accomplished by cleaving mechanism component **84**, which is arranged to determine the cutting point with respect to the ferrule **26** (column 12 lines 11-24, Figures 13A and 13B). However, Long et al does not disclose a manner by which the fiber can be cleaved at a non-perpendicular angle with respect to the longitudinal axis of the fiber. Blonder et al describes an apparatus for cleaving optical fibers where the fiber may be cut at a non-perpendicular angle with respect to the longitudinal axis of the fiber (column 2 lines 4-7). It would have been obvious to one of ordinary skill in the art to combine the teachings of Long et al and Blonder et al to produce a cleaving mechanism that can cleave fibers at non-perpendicular angles, as fibers with these types of cleaves are utilized in several types

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of applications, such as joints, since the tilted end face redirects reflected light that would otherwise be reflected back to the source (column 1 lines 14-25)

Allowable Subject Matter

Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The most applicable prior art discussed above, as well as below, does not disclose, nor does it reasonably suggest a fixing and cleaving mechanism where the following element are present:

- A fixing element with a non-circular cross section coupled to the cleaving mechanism by a non-circular orifice, and a closing means that closes this orifice when the device is not being used.

Claims 27, 29, 31-36, and 38-68 are allowed.

The following is an examiner's statement of reasons for allowance: The most applicable prior art discussed within the body of this Office Action does not disclose, nor does it reasonably suggest a method of coupling optical fibers using a device comprising both a fixing and cleaving mechanism wherein the method includes one of the following:

- A flexibly positionable neck and clamp attached to the device such that the user can temporarily place it in a convenient working position (claim 27).

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- A connector body that is rotatably attached to the device such that it facilitates the insertion of a ferrule and fiber into each end of the connector body from directions of insertion less than 180 degrees apart (claim 29).
- A guide means that allows the ferrule assembly holder to be movable along a controlled path (claim 31).
- A plurality of ferrule assemblies, arranged in succession, and located within the ferrule assembly holder as well as a compressible member attached to the ferrule assembly holder via a flexible member of sufficient length to permit the insertion and locking of the ferrule assembly into the connector body (claim 32).
- Securing means for directly securing the ferrule and the fiber during and after the crimp and cleave operation in the absence of any ferrule holder (claim 35).
- Moving a crimped and secured ferrule containing a cleaved optical fiber into alignment with a connector body in a required orientation either with or without a keying formation on the ferrule and fixing the ferrule to the connector body (claim 38).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

Applicant's arguments with respect to claims 1, 4, 9-11, and 20 have been considered but are moot in view of the new ground(s) of rejection. The examiner is currently under the opinion that the previous indication of allowable subject matter made with respect to the lifetime counter was improper, as this is a feature, while not well-known within the optical arts, is well known within the cutting art. Correspondingly, a new rejection of claim 1 and its dependent claims has been set forth above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Doty (US 4229876) and Gee et al (US 4976390), both cited by the applicant, describe various models of optical fiber cleavers that are designed to be used as a hand-held tool to facilitate ease of use in the field. Carpender et al (US 5734770) describes an optical connector designed to cleave and bevel an optical fiber disposed within the connector. Uken (2002/0067893) describes a optical fiber connector comprised of two separate housings which are compatible with one another, where the first housing connector hold the optical fiber while the second housing connector bends and cleaves the optical fiber held by the first housing connector.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda S. Peace whose telephone number is (571) 272-8580. The examiner can normally be reached on M-F (8-5).


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272- 2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rhonda S. Peace
Examiner
Art Unit 2874



John D. Lee
Primary Examiner